

10/510448  
DT04 Rec'd PCT/PTO 07 OCT 2004AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-16 (cancelled)

17. (new) A spray nozzle consisting of a body defining an axial cavity and having, at one of its ends, an inlet orifice for liquid to be sprayed and, at the other end, a spray orifice, said nozzle comprising, housed in its cavity, from upstream to downstream with reference to the direction of flow X-X' of the liquid, a disk having an axial passage for calibrating the flow of liquid, this passage communicating directly with said inlet orifice, a "divergent" component whose geometry is designed to divide the flow of liquid into small streams and set them in rotation, and a "convergent" component; having an axial passage which communicates with said spray orifice and whose geometry is designed to gather said small streams together into a single jet and to assist in obtaining the desired spraying angle, said calibration disk being secured to a plug fitted hermetically into the cavity in the nozzle body, said divergent part being an independent component immobilized in the cavity in said nozzle body at a level such that a chamber is formed between said divergent part and said convergent part and said convergent part being secured to said nozzle body, characterized in that said divergent part is immobilized in the cavity in the nozzle body, on the downstream side, by simply bearing against a suitably profiled region of the wall of said cavity and, on the upstream side, by said plug.

18. (new) The nozzle as claimed in claim 17, characterized in that said suitably profiled region is in the form of a shoulder or of a conical bearing surface.

19. (new) The nozzle as claimed in claim 17, characterized in that, over its whole periphery, the divergent part is in free contact, on the downstream side, with the nozzle body and, on the upstream side, with the plug.

20. (new) The nozzle as claimed in claim 17, characterized in that said divergent part has, on its upstream surface, a protuberance which can be accommodated in a recess of corresponding shape formed in the downstream face of said plug and can be retained therein.

21. (new) The nozzle as claimed in claim 17, characterized in that said divergent part is a disk having through passages which are oblique and/or in the form of helical portions.

22. (new) The nozzle as claimed in claim 17, characterized in that said divergent part is a reversible disk having through passages which are oblique and/or in the form of helical portions.

23. (new) The nozzle as claimed in claim 17, characterized in that said divergent part is a disk having through passages which are oblique and/or in the form of helical portions, said disk including a marker distinguishing its upstream face from its downstream face.

24. (new) The nozzle as claimed in claim 17, characterized in that said divergent part is a disk having through passages which are oblique and/or in the form of helical portions, said

passages having an "overall area" of between about 3 and about 15 mm<sup>2</sup>.

25. (new) The spray nozzle as claimed in claim 17, characterized in that the duct in the convergent part opens, on the downstream side, into an elliptical concave space or into a space whose complex shape results from a hollowed-out portion which is formed in a convex shape and whose axis of symmetry is perpendicular to that of said duct.

26. (new) The spray nozzle as claimed in claim 17, characterized in that said plug includes at least one grab region protruding from said nozzle body.

27. (new) The nozzle as claimed in claim 17, characterized in that said plug is held in place in the nozzle body by friction between an O-ring and said body, providing sealing between said plug and said body.

28. (new) The spray nozzle as claimed in claim 17, characterized in that said plug has, downstream of said calibration disk, transverse air inlet passages designed to come into alignment with air access orifices formed in the nozzle body and opening out level with a convergent-divergent passage, so as to create a venturi.

29. (new) The nozzle as claimed in claim 17, characterized in that the divergent part has a diameter which takes up between 5 and 10 mm.

30. (new) The nozzle as claimed in claim 17, characterized in that its length is between 11 and 25 mm, and is preferably 18 mm.

31. (new) A spray kit comprising a nozzle as claimed in claim 17 and one or more additional divergent parts which differ from that included in the nozzle in terms of the number of passages and/or the diameter of the passages and/or the geometry of the passages.

32. (new) The use of a nozzle as in claim 17, in an agricultural spray device.